Express5800/120Ed

Rack Mount Kit
Installation Procedures

PN: 455-01607-001

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PN: 455-01607-001 February 2001

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Introduction

This guide provides you with assembly information for preparing and mounting your Express5800/120Ed Server small tower unit into a system rack (see Figure 1).

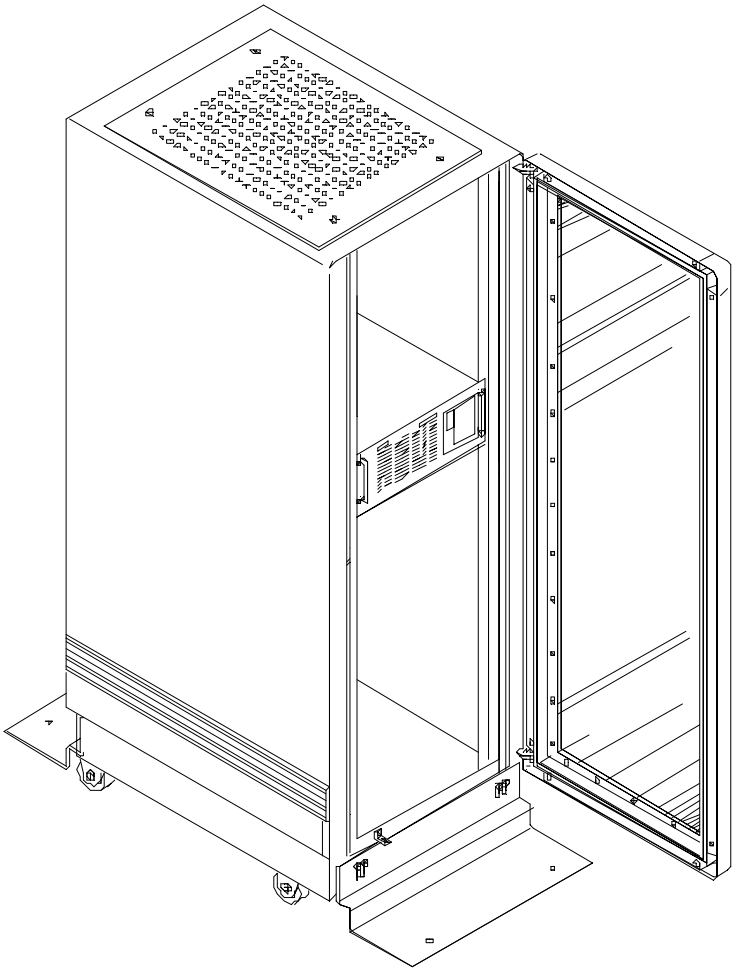


Figure 1. Rack Mounted Server Small Tower Unit

Unpacking and Inspection

Although the rack mount kit is inspected and carefully packaged at the factory, damage may occur during shipping. Follow these steps for unpacking the kit.

1. Visually inspect the shipping container; notify your carrier immediately of any damage.
2. Place shipping container on a flat, clean, stable surface. Carefully remove and verify the contents (see Table 1 and Figure 2). If parts are missing or the equipment is damaged, notify your server representative.
3. Save the container and packing materials for any future reshipment.

Table 1. Rack Mount Kit Parts List (NZA-1203-00-00)

Item	Name	Description	Part Number
A	Rail Kit	1U Rail Kit includes: Left Mounting Rail (246-01521-000) Right Mounting Rail (246-01522-000) Packet of screws (250-0151-000)	246-01523-000
B	Front Bezel	Bezel assembly	890558
C	Plastic Bag	Plastic bag containing four screws and two bezel assembly handles	
D	LED Holder	LED holder	246-01530-000
E	Sleep Label	Sleep stick-on label	405-01580-000
F	Status Label	Status stick-on label	405-01579-000
G	Name Plate	Name plate logo stick-on label	405-01545-000
H	Document	Installation Guide for the 120Ed Server Small Tower Rack Mount Kit (This manual)	455-01607-000

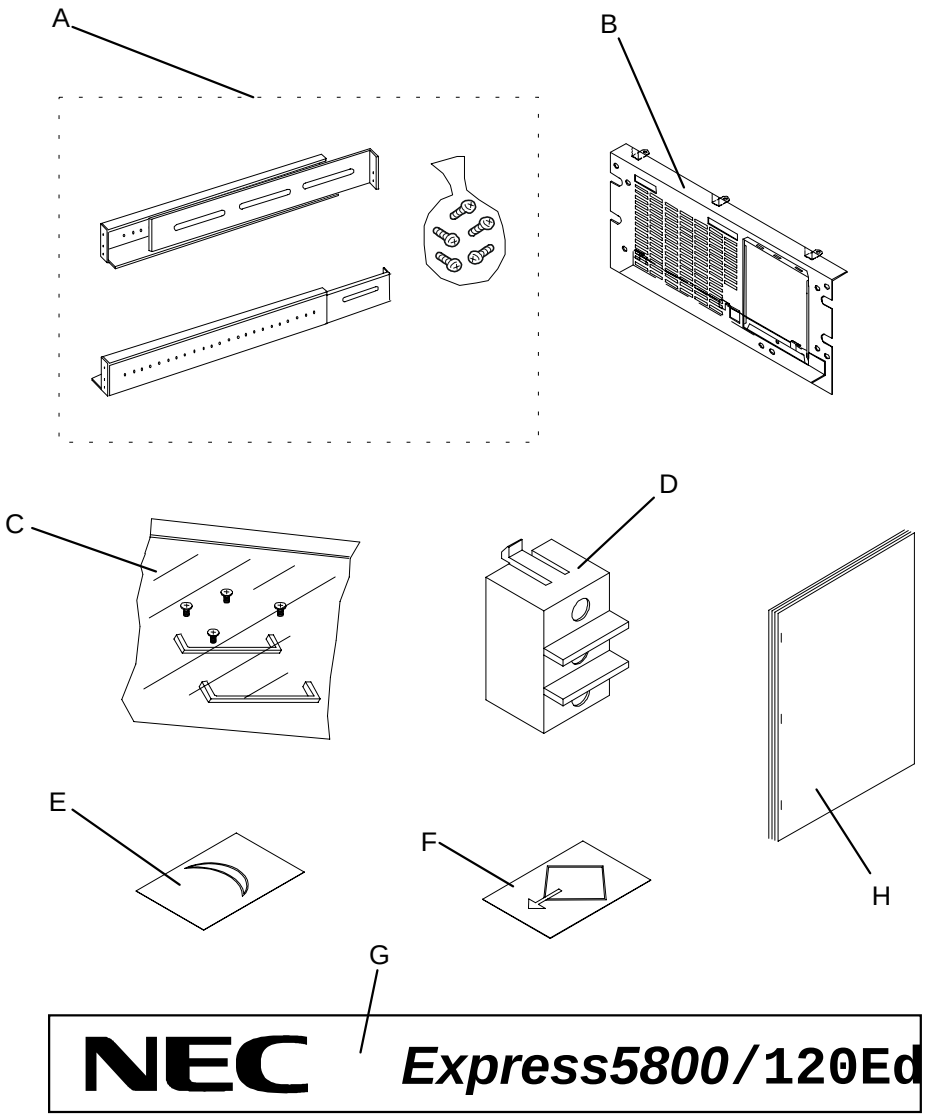


Figure 2. Rack Mount Kit Parts

Before You Begin

Before you begin, please review the following cautions, warnings, and general guidelines.

⚠ WARNING

Be sure that power to the server unit is turned off and unplugged. All voltage is removed only when the power cord is unplugged.

- Avoid excessive vibration and shock. Dropping an electronic component can cause serious damage.
- Do not disconnect or remove parts other than those specified in the procedure.
- Do not touch I/O connector pins.
- All screws are Phillips-head, unless otherwise specified.
- On completion of any reassembly, perform a power-on test. If a fault occurs, verify that the reassembly was performed correctly. If the problem persists, see the *Problem Solving* chapter in your System User's Guide.

What You Need

In addition to the carton contents, the only tools you need are a #2 Phillips, adjustable crescent wrench, and a utility knife to assemble the server unit.

⚠ CAUTION

It is strongly recommended that two people are present when lifting and installing the server unit into a system rack.

Static Precautions

An electrostatic discharge (ESD) can damage disk drives, option boards, and other components. You can provide some ESD protection by wearing an anti-static wrist strap attached to chassis ground when handling system components.

Electronic devices can be easily damaged by static electricity. To prevent damage, keep them in their protective packaging when they are not installed in your system.

Equipment Information

- Measurements for the rack are given in Us where 1U is equal to 1.75 inches.
- Every three holes on the inside of the rack are equal to 1U.
- The height of the Server Small Tower Unit is 5Us (8.75 inches).

Preparing Your Server Unit

To prepare your server small tower unit for rack mounting, you must first remove the front bezel, the side panels, and the four foot stands on the bottom of the unit. After the previously mentioned items are removed, then the new front bezel for rack mounting can be installed on the front of the server unit.

Removing the Front Bezel

⚠ CAUTION

If you are removing the front bezel after the server unit is set up, you must first power off the system and all external devices. **Unplug** the system power cord

The plastic front bezel assembly on your server unit is a one-piece assembly and easy to remove.

Note: The front bezel is secured with six locking tabs.

1. Power off the server unit and ensure it is disconnected from the ac wall outlet.
2. Remove the front bezel by carefully pulling it off the front of the server unit chassis. Use an even amount of pressure around the edges of the bezel. (see Figure 3).

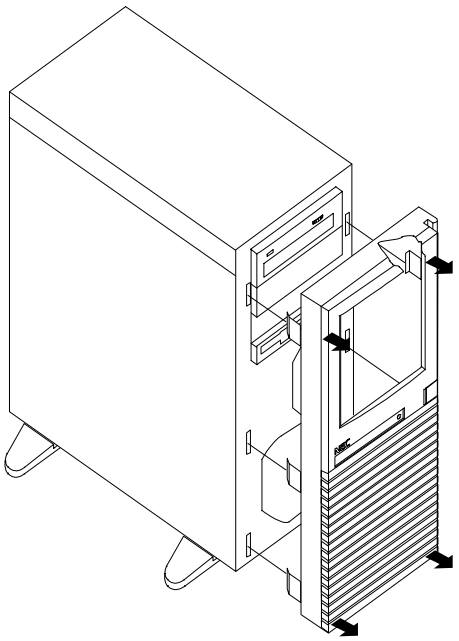


Figure 3. Removing the Front Bezel

Removing the Side Panels

⚠ CAUTION

If you are removing a side panel after the server unit is set up, you must first power off the system and all external devices. **Unplug** the system power cord

To remove a side panel:

1. Power off the server unit and ensure it is disconnected from the ac wall outlet.
2. The side panel is secured to the chassis with three screws. Remove the screws (see Figure 4) securing the side panel. Save the screws for reattaching the side panel.
3. Slide the side panel toward the rear of the chassis. This unlocks the locking fingers behind the side panel.
4. Pull the side panel up and away from the chassis.
5. Remove both the right and left side panels.

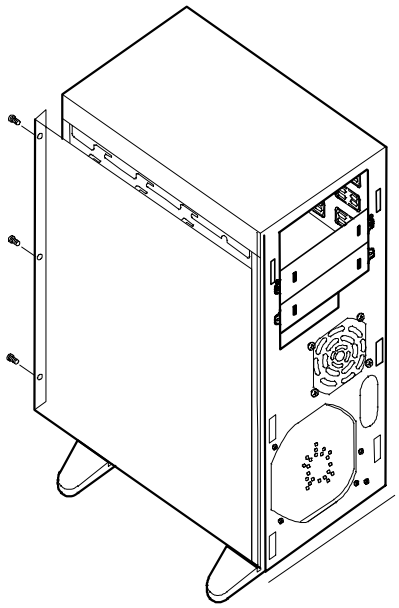


Figure 4. Removing a Server Unit Side Panel

Installing the LED Holder and Labels

The Power and HDD LEDs must be removed from the LED holder currently installed on the front of the chassis and then reinserted into a new LED holder. The Status LED remains in its current LED holder and is reinserted into its original slot in the front of the chassis. The new LED holder is then installed in a vacant slot on the front right-hand side of the server chassis. A name plate logo and two other labels are then adhered to the new front bezel of the server unit.

To install the LED Holder and labels, perform the following:

1. Power off the system and ensure it is disconnected from the ac wall outlet.
2. Remove the front bezel as described earlier in this guide.
3. Remove the side panels as described earlier in this guide.
4. Remove the LED holder currently installed on the front of the chassis by using a pointed instrument, such as a small screwdriver or ball-point pen. Push downward on the top tab of the LED holder while pulling the holder away from the front of the chassis at the same time (see Figure 5).

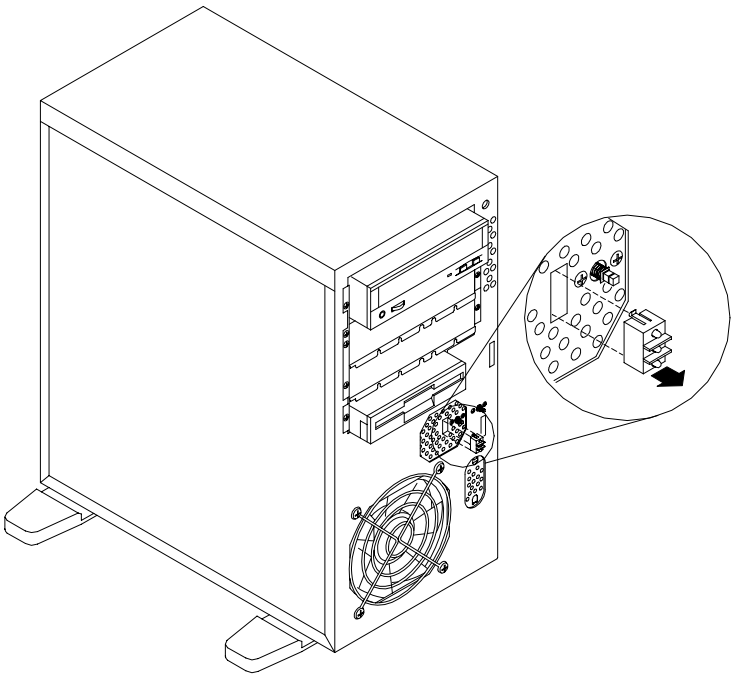


Figure 5. Removing the LED Holder Assembly

5. Tag and remove the Power and HDD LEDs from the top and bottom sockets of the LED holder (see Figure 6).

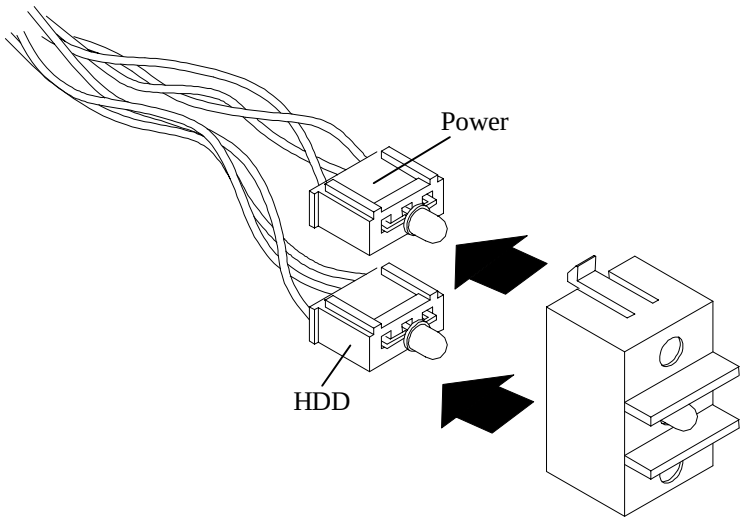


Figure 6. Removing LEDs from the LED Holder

6. Feed the Power and HDD LED cable assemblies back through the mounting hole in the front of the chassis.

7. Reroute the power and HDD LEDs through hole on the right side of the chassis, then into the new LED holder mounting hole slot located on the front right-hand side of the chassis. See Figure 8.

8. Reinsert the Power and HDD LEDs into the top and bottom sockets of the new LED holder
(see Figure 7).

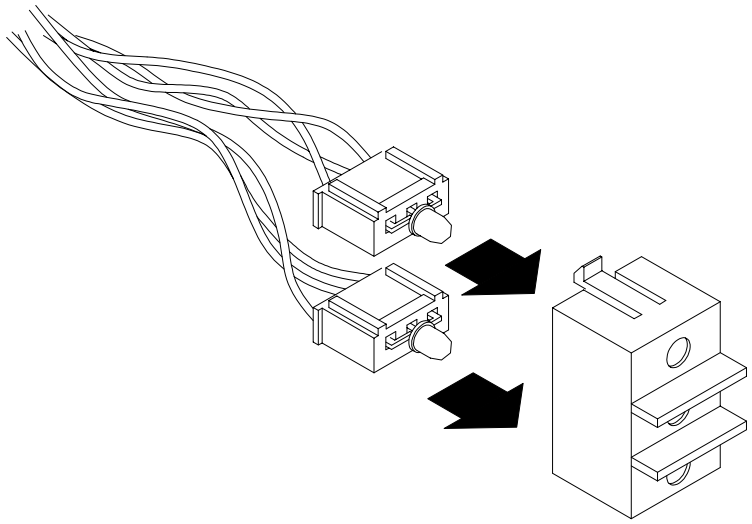


Figure 7. Inserting the Relocated LEDs into the New LED Holder

9. Insert the bottom tab of the new LED holder into the mounting hole slot in the front of the chassis while pushing down on the top tab of the holder and snap the LED holder into place (see Figure 8).

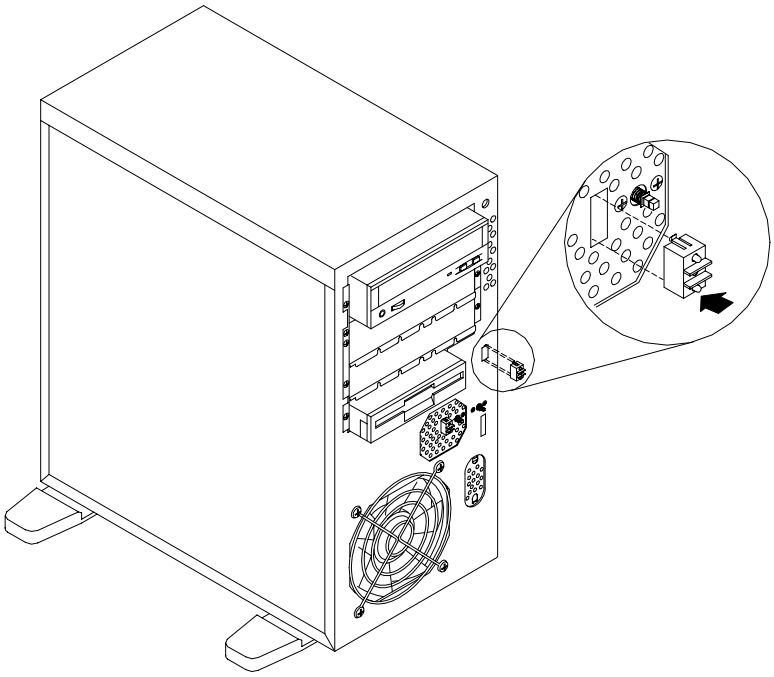


Figure 8. Installing the New LED Holder

10. Reinsert the bottom tab of the original LED holder containing the Status LED back into its mounting hole slot while pushing down on the top tab of the holder and snap the LED holder into place.

11. On the front of the new bezel adhere the three new labels as shown in Figure 9A, B, and C.

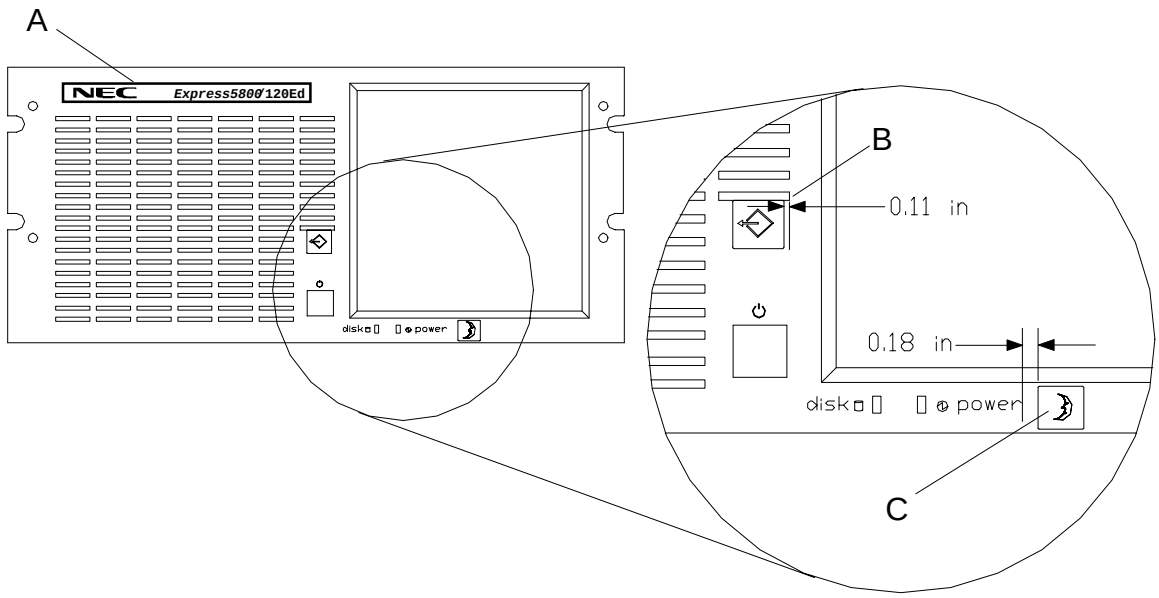


Figure 9. Attaching the New Labels to the Front Bezel

Note: The Status LED is now viewed through the new front bezel panel.

Removing a Foot Stand

Each of the four foot stands located on the bottom of the server unit consists of a three piece assembly and are easily removed (see Figure 10).

> ***Note:*** Each foot stand is secured with two small screws.

1. Power off the system and remove the left side panel of the server unit as described earlier in this chapter.
2. Position the server unit on its right side.
3. Remove the two screws securing the foot stand to the bottom of the server unit. The two screws are located inside on the bottom of the server unit.

> ***Note:*** If an option card is installed in the bottom expansion slot of the server unit, it may be necessary to remove the option card, before the hex screw can be removed that is located under the card.

4. Remove the foot stand (stationary base, movable stand, and long stem nut) from the server unit.
5. Repeat steps 3 and 4 until all four foot stands are removed.

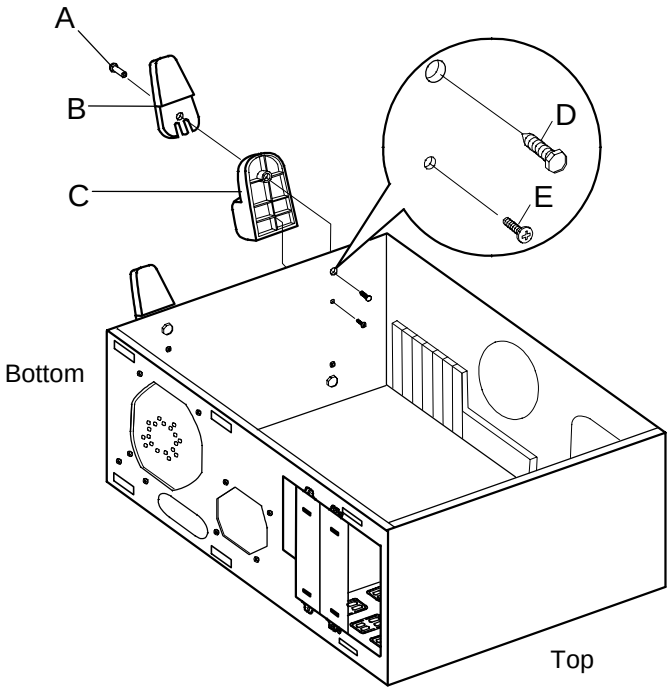


Figure 10. Removing a Foot Stand

Item	Description
A	Long Stem Nut
B	Movable Stand
C	Stationary Base
D	Hex Screw
E	Phillips Head Screw

Installing the New Front Bezel

1. Ensure that the left side panel of the server unit is removed as described earlier.
2. Position the server unit on its right side.

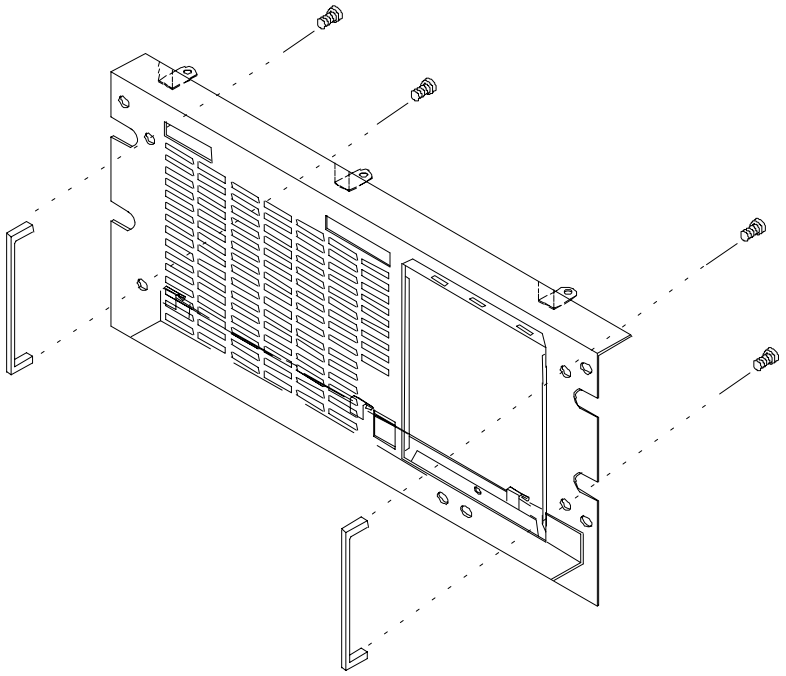


Figure 11. Install the Front Bezel Handles

3. Install two handles onto the new front bezel with the four screws supplied. See Figure 11.
4. Remove the “Device Bay Door” located on the front of the new front bezel (see Figure 12). Loosen the captive spring screw and slide the door out of the front bezel.

> ***Note:*** Save the door for reinstallation.

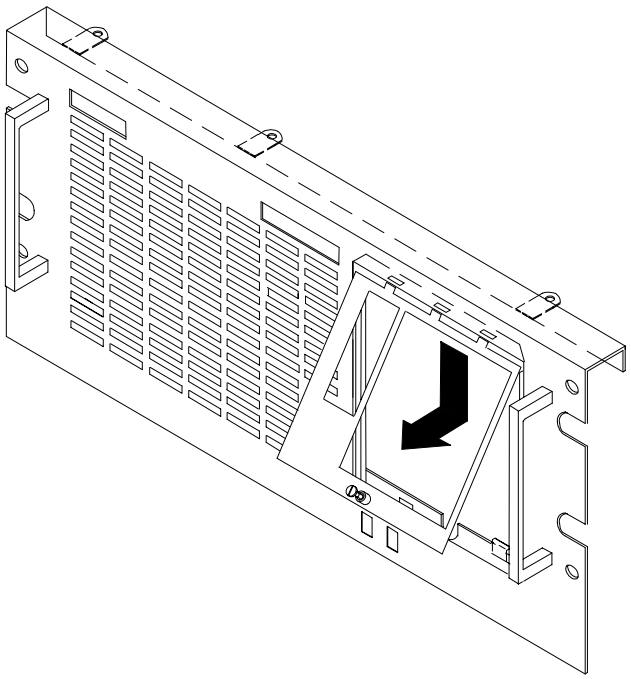


Figure 12. Removing the Device Bay Door

5. Remove the three screws that secure three small brackets located at the top of the new front bezel. See Figure 13. Save the screws and brackets for use in Step 8.

6. Carefully tilt and insert the bottom tab hooks of the front bezel into the corresponding bottom tab slots in the front of the server unit (see Figure 13). If necessary, loosen the screws on the bottom screw brackets of the front bezel so that the tab hooks can be easily aligned to go into the bottom tab slots of the server unit.

⚠ CAUTION

Be careful not to damage LEDs protruding out from the front of the chassis

7. Pivot the top edge of the front bezel up towards the top edge of the server unit until its top metal tabs protrude through the top tab slots.

8. Place a screw bracket over one of the top metal tabs with its back edge up against the inside of the chassis and secure it with a screw. Repeat this step for the other top metal tabs.

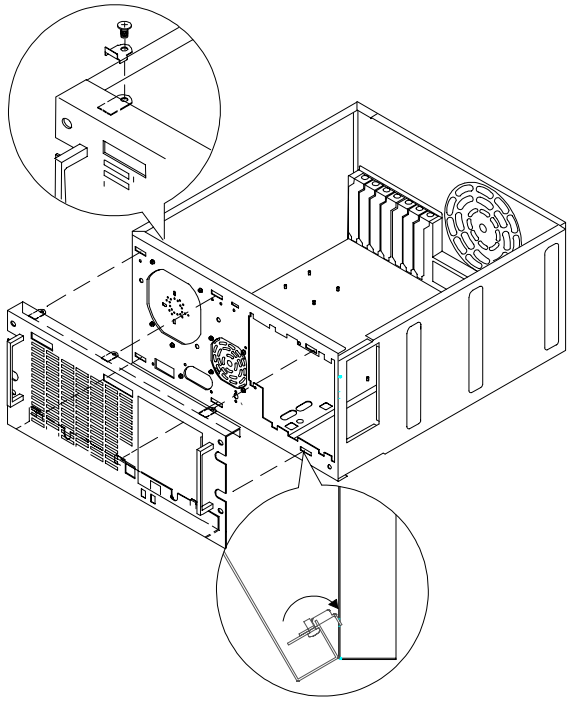


Figure 13. Installing and Securing the Front Bezel

9. Locate the three screw holes underneath the bottom of the front bezel and loosen the screws (see Figure 14). Firmly hold the bottom of the bezel flush against the bottom of the server chassis and tighten the screws. This will correctly align the front bezel to the server chassis.

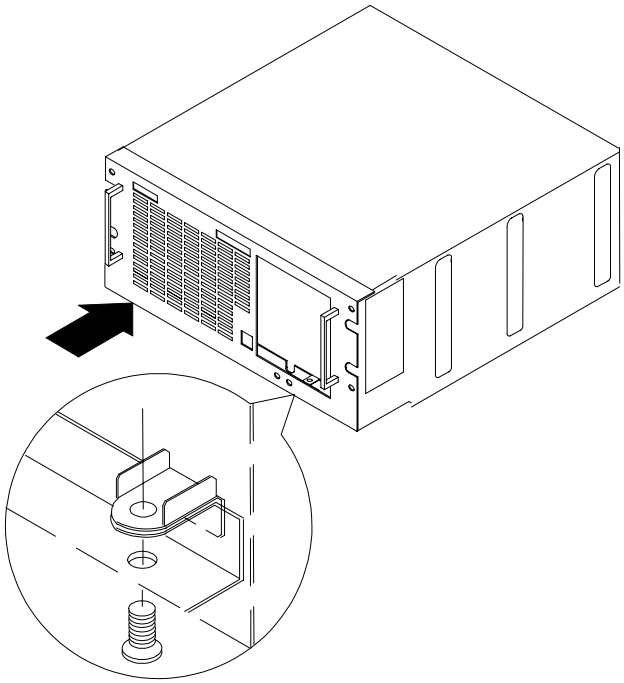


Figure 14. Aligning the Front Bezel to the Server Unit

10. Reinstall the “Device Bay Door” on the front bezel and secure with the captive spring screw (see Figure 15).

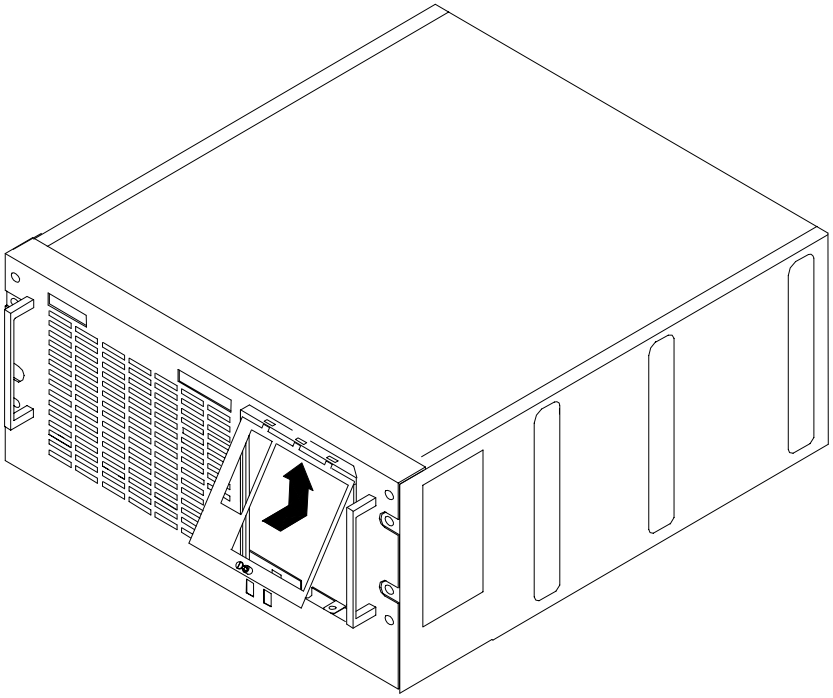


Figure 15. Installing the Device Bay Door

11. Install the side panel on the server unit as described later in this section.

Installing the Side Panels

1. Before replacing the side panels, make sure no tools or loose parts have been left inside the server unit.
2. Make sure all option boards are firmly seated in their respective slots and that all interior cables are properly connected inside the server unit.
3. Insert the metal locking fingers on the top and bottom of the side panel into their slots on the chassis. Slide the side panel forward as far as it will go.
4. Replace the three side panel retaining screws (see Figure 4).

Preparing the Mounting Bracket Assemblies

Your server mounts in the system rack using two rail assemblies. The left rail assembly as viewed from the front of the system rack is shown in Figure 16. Each rail assembly consists of two rack mounting brackets (A and B). These pieces can be separated and adjusted. The distance between the front rack mounting bracket (A) and the rear rack mounting bracket (B) is adjustable to fit between the front and rear vertical rails of the system rack.

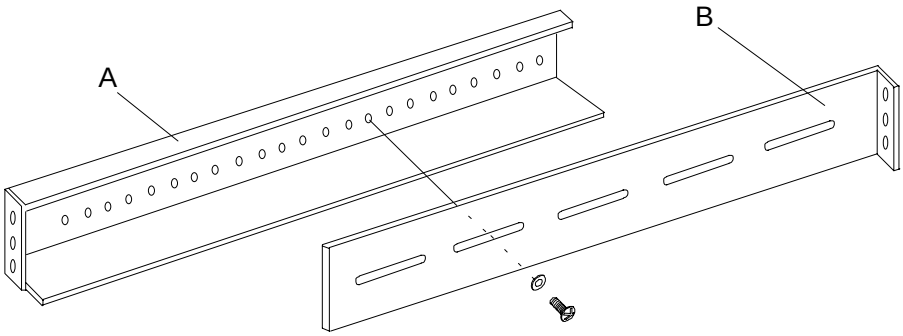


Figure 16. Left Rail Assembly

1. Referring to Figure 16, remove any screws securing the front mounting bracket (A) to the rear mounting bracket (B). Perform this step on the right rail assembly.
2. Select an appropriate location in the rack cabinet for the rack-mount server. To improve rack stability, mount heavier items towards the bottom of the rack cabinet.

> ***Note:*** When planning the server configuration for the rack cabinet you should consider the length of the cables that interconnect with system components.

Attaching the Mounting Bracket Assembly to the Rack

1. Attach the left side front mounting bracket to the front of the rack using two Phillips flange head screws supplied. See Figure 17.
2. Attach the right side front mounting bracket to the front of the rack using two Phillips flange head screws supplied.

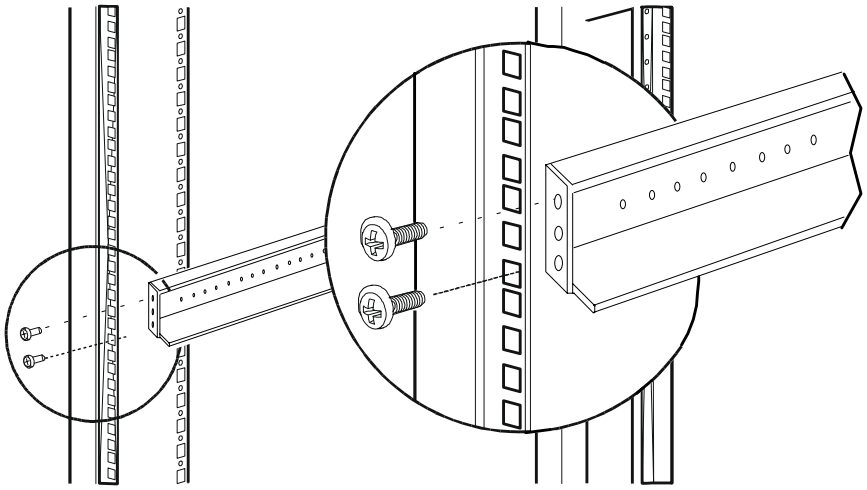


Figure 17. Attaching the Mounting Bracket to the Front of the Rack

3. Attach the left and right rear mounting brackets to the rear of the rack using Phillips flange head screws supplied.

4. Attach the left front and rear mounting brackets to each other using three of the Phillips-head self-tapping screws and flat washers supplied.
   See Figure 18.

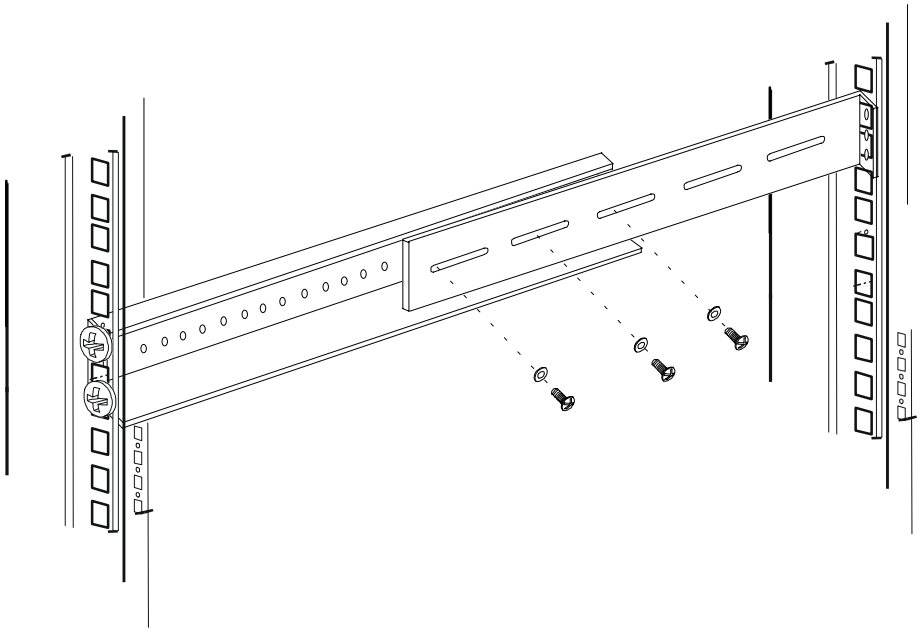


Figure 18. Securing the Front and Rear Mounting Brackets

5. Attach the right front and rear mounting brackets to each other using three of the Phillips-head self-tapping screws and flat washers supplied.

6. Securely tighten the all Phillips screws installed in steps 1 through 5.

Installing the Server into the System Rack

This section describes how to install your rack-mount server unit into a standard EIA 19-inch rack cabinet.

WARNING

Your system weighs approximately 45 pounds (20.41 kg). If your system contains numerous optional boards and peripheral devices, it will weigh more. To avoid personal injury, make sure you have someone help you lift or move the system.

WARNING

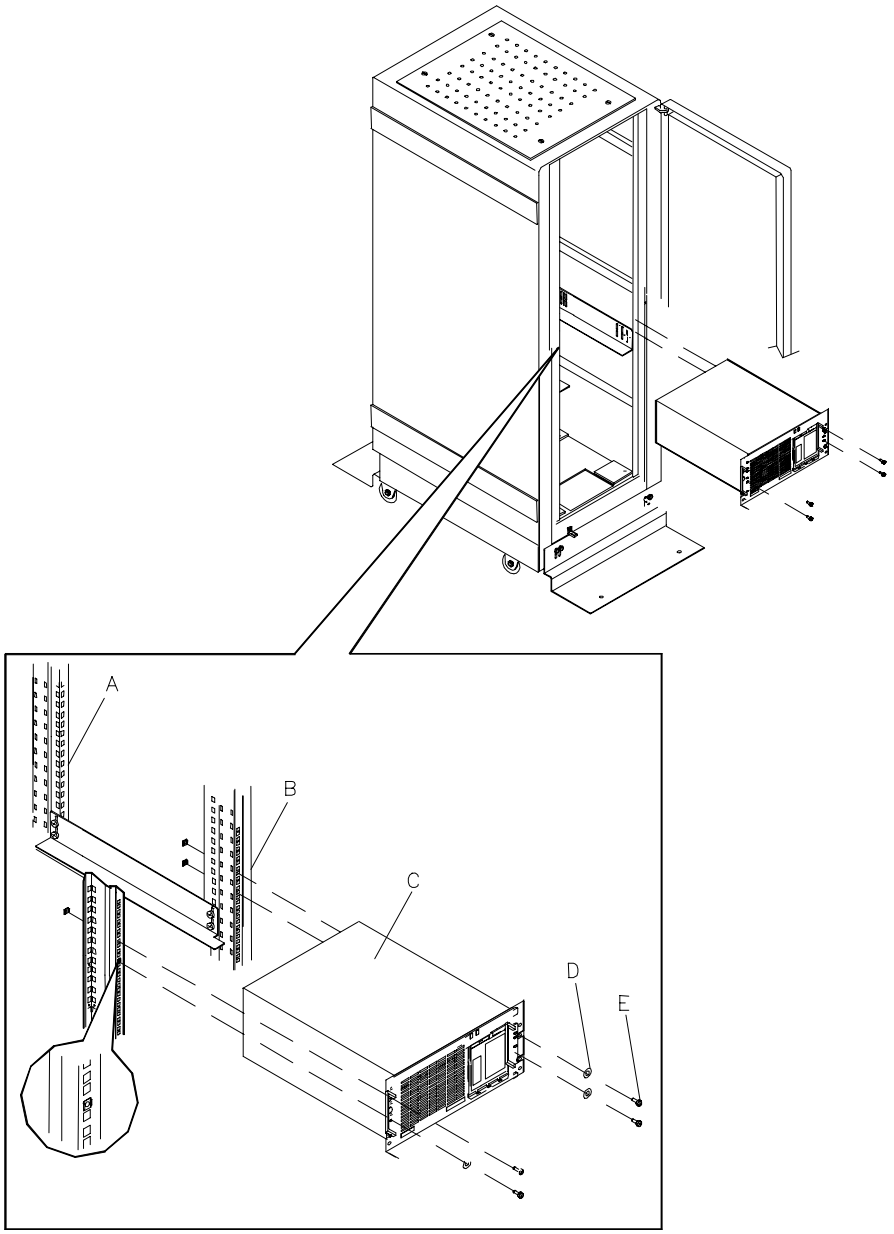
Ensure that the location of the rack-mount server unit does not create an unstable condition when installed in the rack cabinet.

1. Lift the rack-mount server unit Figure 19, C onto the two support brackets and slide it toward the rear of the rack cabinet.

WARNING

It is strongly recommended that two people are present when lifting and assembling the rack-mount server unit into a rack cabinet.

2. Secure the front bezel to the rack cabinet's front vertical mounting rails (B) using the four screws (E) and plastic washers (D) provided. See Figure 19.



A. Rear vertical mounting rail

B. Front vertical mounting rail

C Rack-mount server unit

D Four plastic washers

E Four screws

Figure 19. Installing the Rack-Mount Server Unit into the Rack Cabinet

Making Connections

Refer to Figure 20 and connect your keyboard, monitor, and mouse. Connect any external peripheral devices such as a printer or modem by following the instructions included with these devices.

⚠ CAUTION

Damage to the system may result if the keyboard/mouse cable is inserted or removed when power is applied to the system.

Inserting a telephone line connector into a LAN board RJ-45 port may result in personal injury and equipment damage.

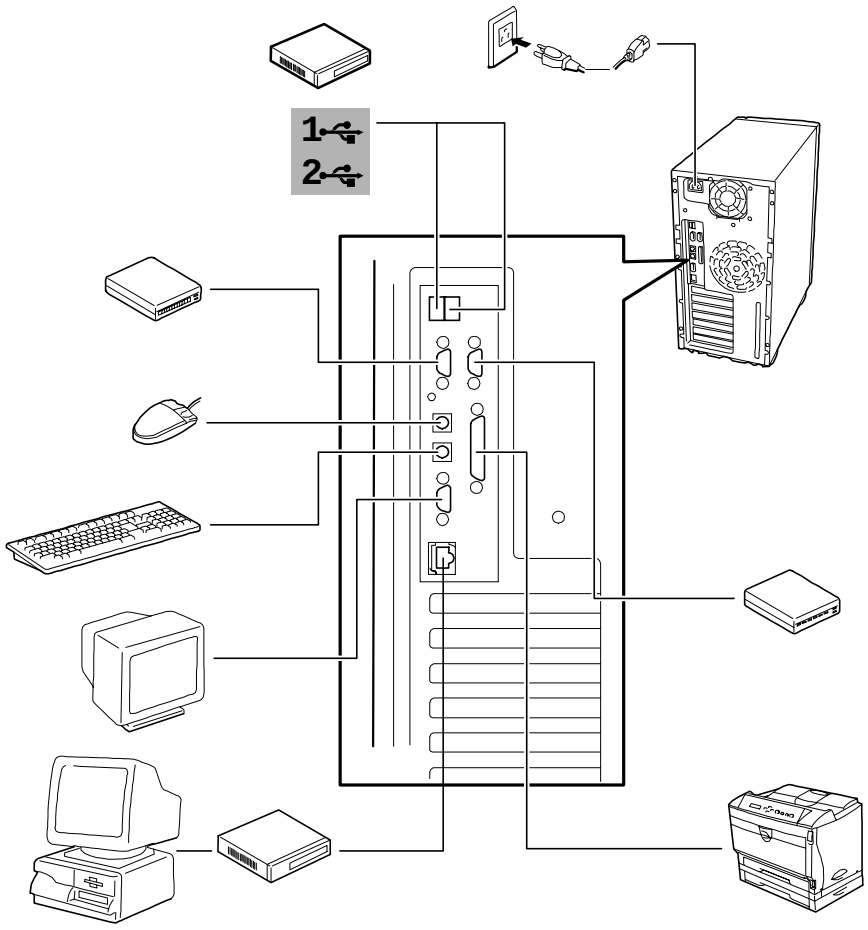


Figure 20. Making Connections

Connecting the Power Cord

Plug the female end of the AC power cord into the input receptacle on the rear of the power supply cage. Plug the male end of the power cord into NEMA 5-15R outlet for 100-120 VAC or NEMA 6-15R outlet for 200-240 VAC.

If the power cord supplied with the system is not compatible with the AC wall outlet in your region, obtain a suitable power cord that meets the following criteria.

- The power cord must be rated for the available AC voltage and have a current rating that is at least 125% of the current rating of the system.
- The power cord connector that plugs into the wall outlet must be terminated in a grounding-type male plug designed for use in your region. It must have certification marks showing certification by an agency acceptable in your region.
- The power cord connector that plugs into the system must be an IEC- type CEE-22 female connector.
- The power cord must be less than 1.8 meters (6.0 feet) long.

When connecting the power cord to a power control unit such as an UPS, confirm that the power control unit is powered off. Connecting the power cord while power is supplied to the power control unit may cause a failure.

⚠ WARNING

Your system shipped with a power cord for the power supply. Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

Powering On Your System

Power on your system as follows.

1. Make sure all external devices, such as a video display, keyboard, and mouse have been connected, and the power cords are connected.
2. Power on the video display and any other external devices.
3. Press the push-button power on/off switch on the front panel. Verify that the system power-on LED is lit.

> ***Note:*** The server management logic on your system board monitors and logs system voltage changes. When powering up or down your system you may experience a 1–5 second delay from the time you press the push-button power on/off switch on the front panel and your system powering down. This is normal system operation and is required by the server management logic.

After a few seconds your system begins the internal Power-On Self Tests (POST). POST automatically checks the system board, CPU module, memory, keyboard, and most installed peripheral devices.

> **⚠ CAUTION**
>
> Always allow POST to complete before powering down your system.

If you have problems powering on your system, refer to *Problem Solving* in Chapter 5 of your System User's Guide.

After you have successfully powered on your system, insert the EXPRESSBUILDER CD-ROM into the CD-ROM device, reboot the system and follow the screen prompts to run EXPRESSBUILDER.